

14.01	TWO-WAY VIDEO AND VOICE COMMUNICATION (E.G., VIDEOPHONE)	37	.With continuously rotating element
14.02	.Over wireless communication	38	.Multiple channels
14.03	.User interface (e.g., touch screen menu)	39	.With observer selected field of view
14.04	.Operating with other appliance (e.g., TV, VCR, FAX, etc.)	40	HOLOGRAPHIC
14.05	.Remote control	41	.Color TV
14.06	.Answering machine	42	STEREOSCOPIC
14.07	.Display arrangement (e.g., multiscreen display)	43	.Signal formatting
14.08	.Conferencing (e.g., loop)	44	.Pseudo
14.09	..Conferencing with multipoint control unit	45	.Endoscope
14.1	..Motion image conferencing	46	.Picture signal generator
14.11	.Switching	47	..Multiple cameras
14.12	.Transmission control (e.g., resolution or quality)	48	...More than two cameras
14.13	..Compression or decompression	49	..Single camera with optical path division
14.14	..Still frame (e.g., freeze frame)	50	..Single camera from multiple positions
14.15	..Field or frame difference (e.g., moving frame)	51	.Stereoscopic display device
14.16	.User positioning (e.g., parallax)	52	..More than two display devices
21	PLURAL TRANSMITTER SYSTEM CONSIDERATIONS (E.G., INTERFERENCE REDUCTION)	53	..Viewer attached
22	SLOW SCANNING TRANSMISSION (E.G., STILL FRAME)	54	..Single display with optical path division
23	.Color TV	55	...Separation by time division
24	PLURAL STILL IMAGES OVER CONVENTIONAL CHANNEL	56	....With alternating shutters
25	IMAGE FALSIFICATION TO IMPROVE VIEWER PERCEPTION OF SELECTIVE OBJECT (E.G., MOVING OBJECT OR TARGET)	57	....With alternating polarization
26	.Contour generator	58	...Separation by polarization
27	.Quantizer	59	...Separation by lenticular screen
28	.Selective contrast expander	60	...Separation by color (i.e., anaglyphic)
29	.False color	61	SPECIAL APPLICATIONS
30	..Hue expander	62	.Aid for the blind
31	BACK SCATTER REDUCTION	63	..Image magnifying
32	PSEUDO COLOR	64	.Combined electronic sensing and photographic film cameras
33	.Multispectral to color conversion (e.g., infrared and visible, infrared bands, etc.)	65	.With endoscope
34	.Including intensity to color conversion (e.g., colorizer, etc.)	66	..Dental
35	PSEUDO BLACK AND WHITE	67	..Laser
36	PANORAMIC	68	..Illumination
		69	...Controlled by video signal
		70	...Color sequential illumination
		71	..Color TV
		72	..Plural endoscopes interchangeable
		73	..External camera
		74	..With additional adjunct (e.g., recorder control, etc.)
		75	..Adaptor or connector
		76	..Physical structure of circuit element
		77	.Human body observation
		78	..Eye

79	.Microscope	125	.Flaw detector
80	..Electronic	126	..Of electronic circuit chip or board
81	.Underwater		
82	.Hazardous or inaccessible	127	..Of transparent container or content (e.g., bottle, jar, etc.)
83	..Furnace (e.g., nuclear reactor, etc.)		
84	..Pipeline	128	..Of surface (e.g., texture or smoothness, etc.)
85	..Borehole		
86	.Manufacturing	129	..By comparison with reference object
87	..Electronic circuit chip or board (e.g., positioning)	130	...With stored representation of reference object
88	..Web, sheet or filament		
89	..Agricultural or food production	131	..With specific illumination detail
90	..Welding		
91	..Sorting, distributing or classifying	132	...With strobe illumination
92	..Quality inspection	133	..With circuit detail
93	...Color TV	134	...Including line to line comparison
94	..Position detection	135	.Object or scene measurement
95	...Alignment or positioning	136	..Projected scale on object
96	.Film, disc or card scanning	137	..Scale on camera target
97	..Motion picture film scanner	138	..Pulse or clock counting
98	...Mechanical optical scanning	139	..Multiple cameras on baseline (e.g., range finder, etc.)
99	....Flying spot scanner		
100	....Flying spot scanner	140	..Distance by apparent target size (e.g., stadia, etc.)
101	....Color TV		
102	....Intermittent film movement	141	..By cursor coordinate location
103	....With modification of scanner sweep	142	..With camera and object moved relative to each other
104	...Color TV	143	.Observation of or from a specific location (e.g., surveillance)
105	...Intermittent film movement		
106	...With modification of scanner sweep	144	..Aerial viewing
107	..With record location	145	...With linear array
108	..Flying spot scanner	146	...With rotating reflector
109	...Color TV	147	...With transformation or rectification
110	..Slide		
111	...Color TV	148	..Vehicular
112	..Microfilm	149	...Traffic monitoring
113	.Navigation	150	..Point of sale or banking
114	..Remote control	151	..Camera concealment
115	..Head-up display	152	..Intrusion detection
116	..Direction finding or location determination	153	...Using plural cameras
117	..Aircraft or spacecraft	154	....Motion detection
118	..Land vehicle	155	...Motion detection
119	...Program control (e.g., path guidance, etc.)	156	..Access control
120	...Farm vehicle	157	..Sporting event
121	.Simulator	158	..Portable
122	..Visibility (e.g., fog, etc.)	159	..Plural cameras
123	..Aircraft or spacecraft	160	..Reading meter or data printer
124	..Ship	161	.Object comparison (e.g., remote verification of signature, etc.)

162	RESPONSIVE TO NONVISIBLE ENERGY	207.99	CAMERA, SYSTEM AND DETAIL
163	.Sonic or ultrasonic	207.1	.Camera connected to computer
164	.Infrared	207.11	..Computer can control camera
165	..Pyroelectric	207.2	.Camera connected to printer
166	..With linear array	208.99	.Camera image stabilization
167	...With rotating reflector	208.1	..Electrical motion detection
168	..With rotating reflector	208.2	..Mechanical motion detection (gyros, accelerometers, etc.)
169	OBJECT TRACKING	208.3	..Differentiating unintentional from purposeful camera movement (pan, tilt)
170	.Using tracking gate	208.4	..Motion correction
171	..Centroidal tracking	208.5	...Including both electrical and mechanical correcting devices
172	.Centroidal tracking	208.6	...Electrical (memory shifting, electronic zoom, etc.)
173	CATHODE-RAY TUBE BURN-IN PREVENTION	208.7	...Mechanical
174	.Camera	208.8	...Variable angle prisms
175	CAMERA WITH BUILT-IN TEST SIGNAL GENERATOR, TEST PATTERN, OR ADJUSTING ADJUNCT	208.11	...Optics, lens shifting
176	.Setup	208.12	..Combined with other camera operations (e.g., autofocus or autoexposure details)
177	DISPLAY OR RECEIVER WITH BUILT-IN TEST SIGNAL GENERATOR, TEST PATTERN, OR ADJUSTING ADJUNCT	208.13	...Motion correction plus resolution enhancement
178	.Setup	208.14	...Object tracking
179	..Color match comparator	208.15	...Warning/indicator
180	MONITORING, TESTING, OR MEASURING	208.16	...Changing camera function based on motion detection (mode, power supply)
181	.Test signal generator	209.99	.With flying spot scanner
182	..Chroma or color bar	210.99	..For color scanning
183	..VITS or ILTS	211.99	.Remote control
184	.Monitor	211.1	..Communication methods
185	..Combined plural functions (e.g., picture and waveform monitor)	211.2	...Wireless
186	..Vectorscope	211.3	...Network (master/slave, client or server, etc.)
187	.Testing of camera	211.4	..Control devices
188	..Using test chart	211.5	...Multiplexed or other embedded control signals
189	.Testing of image reproducer	211.6	...Preprogrammed or stored control instructions
190	..Alignment-manufacturing	211.7	...Electromechanical controls (joystick, trackball, mouse, etc.)
191	..Display photometry	211.8	...Monitor used to control remote camera
192	.Transmission path testing	211.9	..Camera characteristics affecting control (zoom angle, distance to camera time delays, weight, etc.)
193	..Signal to noise ratio	211.11	..Plural cameras being controlled
194	.Synchronization (e.g., H-sync to subcarrier)	211.12	...Video teleconferencing (including access or authorization)
195	MECHANICAL OPTICAL SCANNING		
196	.Color TV		
197	.With fiber optics		
198	.By acoustic wave		
199	.Moving aperture		
200	..Drum or belt		
201	..Multiple scanning elements		
202	.Moving lens or refractor		
203	.Moving reflector		
204	..Helical element		
205	..Vibrating or oscillating		
206	SPECIAL SCANNING (E.G., SPIRAL, RANDOM, ZIGZAG)		

211.13	....Monitor (including for controlling camera)	234	..Details of luminance signal formation in color camera
211.14	..Camera located remotely from image processor (i.e., camera head)	235	...With means for providing high band and low band luminance signals
215.1	..With streak device	236	....Using distinct luminance image sensor
216.1	..Low light level	237	....For single sensor type camera supplying plural color signals
217.1	..With image intensifier	238	...Using distinct luminance image sensor
218.1	..Unitary image formed by compiling sub-areas of same scene (e.g., array of cameras)	239	..Camera and video special effects (e.g., subtitling, fading, or merging)
219.1	..Swing driven	241	..Including noise or undesired signal reduction
220.1	..Still and motion modes of operation	242	...Color TV
221.1	..Exposure control	243	...Dark current
222.1	..Combined image signal generator and general image signal processing	244	....With control of sensor temperature
223.1	..Color balance (e.g., white balance)	245	....Using dummy pixels
224.1	...Dependent upon operation or characteristic of iris, flash, lens, or filter)	246	...Defective pixel (e.g., signal replacement)
225.1	...With means for preventing colored object from effecting color balance	247	....With memory of defective pixels
226.1	..Including flicker detection (e.g., fluorescent)	248	...Smear
227.1	...With ambient light sensor	249	....In charge coupled type sensor
228.1	...Responsive to output signal	250	...In charge coupled type sensor
229.1	..Combined automatic gain control and exposure control (i.e., sensitivity control)	251	...Shading or black spot correction
230.1	...Readout of solid-state image sensor considered or altered	252	..With transition or edge sharpening (e.g., aperture correction)
231.99	..With details of static memory for output image (e.g., for a still camera)	253	...Color TV
231.1	...Available memory space detection	254	..Gray scale transformation (e.g., gamma correction)
231.2	...Image file management	255	...Amplitude control (e.g., automatic gain control)
231.3	...Storage of additional data	256	....Color TV (e.g., saturation)
231.4	....Audio	257	..With DC level control
231.5	....Time or date, annotation	258	...With bias illumination
231.6	....Processing or camera details	259	....Combined with color separating optical system
231.7	...Detachable	260	....For single scanning device color camera
231.8	....Multiple detachable memories	261	....Plural bias illuminators
231.9	....Details of communication between memory and camera	262	..With plural image scanning devices
240.99	..Zoom	263	..Color imagery registration
240.1	...Using both optical and electronic zoom	264	..Scanning devices offset in the image plane
240.2	...Electronic zoom	265	..Each supplying only one color signal
240.3	...Optical zoom		

266	..With single image scanning device supplying plural color signals	302	..X - Y architecture
267	..Separate complete images on face of pickup device	303	...With charge transfer type output register
268	..Color sequential	304	...With charge transfer type selecting register
269	...With color sequential illumination	305	...With interlacing
270	...With moving color filters	306	...Charge injection device (CID)
271	....Four or more color types	307	...Photosensitive switching transistors or "static induction" transistors
272	..Solid-state multicolor image sensor	308	...Including switching transistor and photocell at each pixel site (e.g., "MOS-type" image sensor)
273	...With color filter or operation according to color filter	309	...Exclusively passive light responsive elements in the matrix
274	....Having overlapping elements	310	....With diode in series with photocell
275	....Staggered or irregular elements	311	..Charge-coupled architecture
276	....Including transparent elements	312	...With timing pulse generator
277	.....With three or more colors	313	...With bias charge injection
278	....Based on more than four colors	314	...With excess charge removal (e.g., overflow drain)
279	....Based on four colors	315	...With staggered or irregular photosites or specified channel configuration
280	....Based on three colors	316	...Charges transferred to opposed registers
281	....X-Y architecture	317	...Field or frame transfer type
282	....Charge coupled architecture	318	....With recirculation of charge
283	.....With multiple output registers	319	....Charges alternately switched from vertical registers into separate storage registers; or having vertical transfer gates
284	..Cathode-ray tube	320	....Interline readout
285	...Phase separable signals	321	.....Using multiple output registers
286	....With indexing	322	...Interline readout
287	.....Conductive grid at target	323	....Using multiple output registers
288	.....Index elements outside of image area	324	...Line transfer type
289	...Frequency separable signals	325	..Cathode-ray tube
290	....Specified optical filter arrangement	326	..Automatic beam focusing or alignment
291	.....Combined with grating, lens array, or refractor	327	..Automatic beam current control
292	.....Having diagonally arranged stripes	328	..Remanent image erasure
293	....Interdigital signal electrodes	329	..With emissive target or photocathode (e.g., orthicon)
294	..Solid-state image sensor	330	...Dissector tube
295	..Time delay and integration mode (TDI)	331	..With photoconductive target (e.g., vidicon)
296	..Electronic shuttering	332	..Array of photocells (i.e., nonsolid-state array)
297	..Accumulation or integration time responsive to light or signal intensity		
298	...In charge coupled type image sensor		
299	....With overflow gate or drain		
300	..With amplifier		
301	...Pixel amplifiers		

333.01	..With electronic viewfinder or display monitor	357	...Servo unit structure or mechanism
333.02	..With display of additional information	359	..Fiber optics
333.03	...Including display of a frame and line of sight determination	360	..Lens or filter substitution
333.04	...Including warning indication	361	...Automatic
333.05	..Display of multiple images (e.g., thumbnail images, etc.)	362	..Exposure control
333.06	..Movable or rotatable unit	363	...Automatic control of iris, stop, or diaphragm
333.07	...Detachable	364	....Based on image signal
333.08	..Including optics	365	.....Contrast
333.09	...With optical viewfinder (e.g., correction for parallax, etc.)	366	....Based on ambient light
333.1	...With projector function	367	...Periodic shuttering
333.11	..Use for previewing images (e.g., variety of image resolutions, etc.)	368	....Rotary
333.12	..Modification of displayed image	369	..Changing viewing angle via optics
333.13	..Power saving mode	370	..With object or scene illumination
335	..Optics	371	..Flash or strobe
336	..Color separating optics	372	..Power supply
337	...Prism arrangement	373	..Support or housing
338	....With dichroic layer or air gap between prism sections	374	..For internal camera components
339	...Exclusively dichroic elements	375	..For specified accessory
340	..With optics peculiar to solid-state sensor	376	..Portable or hand-held
341	..Optical viewfinder	377	CATHODE-RAY TUBE DISPLAY
342	..With frequency selective filter (e.g., IR cut, optical LPF, etc.)	378	EXCESSIVE VOLTAGE CONTROL
343	..Optical multiplexing	379	..With disabling
344	..Optical path switching		CATHODE-RAY TUBE DISPLAY
345	..Focus control		AUTOMATIC BLACK LEVEL BIAS CONTROL
346	...With display of focusing condition or alarm	380	CATHODE-RAY TUBE DISPLAY BEAM CURRENT CONTROL
347	...With zoom position detection or interrelated iris control	381	..With beam energy determining color
348	...Using active ranging	382	..Variable depth of penetration of electron beam into the luminescent layer
349	...Using image signal	383	MODULAR IMAGE DISPLAY SYSTEM
350	....With auxiliary sensor or separate area on imager	384.1	BANDWIDTH REDUCTION SYSTEM
351	....With oscillation of lens or sensor to optimize error signal	385.1	..Plural video programs in single channel
352	....With motion detection	386.1	..Color television
353	....By detecting contrast	387.1	..Data rate reduction
354	....By analyzing high frequency component	388.1	..Multiple channel (e.g., plural carrier)
355	.....Plural high frequencies	389.1	..Including one conventional or compatible channel (e.g., two channel NTSC systems)
356	.....Detection of peak or slope of image signal	390.1	..Data rate reduction
		391.1	..Specified color signal
		392.1	...Sub-Nyquist sampling
		393.1	...Direct coding of color composite signal
		394.1	....Predictive coding
		395.1	....Transform coding

396.1	...Including luminance signal	426.1	.Format type
397.1	..Using separate coders for different picture features (e.g., highs, lows)	427.1	..Including frequency folding (e.g., subsampling)
398.1	...Subband encoding (e.g., low horizontal/low vertical frequency, low horizontal/high vertical frequency)	428.1	...Spotwobble (e.g., pixels from plural lines form single transmitted line)
399.1	..Picture feature dependent sampling rate or sample selection	429.1	...Including video-related information
400.1	..Involving hybrid transform and difference coding	430.1	...Using two or more frames
401.1	...With prior difference coding	431.1	...Motion adaptive
402.1	...Including motion vector	432.1	..Added video information in standard channel format
403.1	..Involving transform coding	433.1	...Including additional modulation of picture carrier (e.g., quadrature)
404.1	...Adaptive	434.1	...Including information in sync, blanking, or overscan
405.1	....Sampling	435.1	....During vertical blanking interval
406.1	....Normalizer	436.1	...Including use of a subcarrier
407.1	....Motion	437.1	..Individual processing of different parts of image frequency band (e.g., sum and difference, high band/low band)
408.1	...Transformed sample selection (e.g., hierarchical sample selection)	438.1	..Individual processing of different parts of image frequency band (e.g., sum and difference, high band/low band)
409.1	..Involving difference transmission (e.g., predictive)	439.1	.Frame field or line dropping followed by time expansion and time compression
410.1	...Involving both base and differential encoding	440.1	.Scan rate variation
411.1	...Plural predictors	441	FORMAT CONVERSION
412.1	....Including temporal predictor (e.g., frame difference)	442	.Involving polar to Cartesian or vice versa
413.1	.....Including motion vector	443	.Involving both line number and field rate conversion (e.g., PAL to NTSC)
414.1	....Involving pattern matching	444	..Specified chrominance signal
415.1	...Including temporal prediction (e.g., frame difference)	445	.Conversion between standards with different aspect ratios
416.1	....Including motion vector	446	.Progressive to interlace
417.1	....Involving pattern matching	447	.Field rate type flicker compensating
418.1	...Involving pattern matching	448	.Line doublers type (e.g., interlace to progressive IDTV type)
419.1	...Coding element controlled by buffer fullness	449	..Including nonstandard signal detection
420.1	..Involving block coding	450	..Specified chrominance processing (e.g., Y/C separation)
421.1	...Involving minimum, maximum, or average of block	451	...Motion adaptive
422.1	..Involving pattern matching		
423.1	..Arrangements for multiplexing one video signal, one or more audio signals, and a synchronizing signal		
424.1	..Sub-Nyquist sampling		
424.2	...Adaptive		
425.1	..Associated signal processing		
425.2	...Involving error detection or correction		
425.3	...Involving signal formatting		
425.4	...Involving synchronization		

452	..Motion adaptive	487	.Broadband (e.g., occupying two adjacent channels or parts thereof)
453	.Specified chrominance processing	488	.Specified color signal format
454	..PAL to NTSC or vice versa	489	..Time division multiplexing of luminance and chrominance (e.g., MAC)
455	..In which simultaneous signals are converted into sequential signals or vice versa	490	..Field or frame sequential systems
456	...Field or frame sequential to simultaneous	491	..Simultaneous and sequential (e.g., SECAM)
457	..Frequency change of subcarrier	492	..Simultaneous signals
458	.Changing number of lines for standard conversion	493	...Luminance plus dual-phase modulated color carrier
459	.Changing number of fields for standard conversion	494	...Dot sequential
460	DIVERSE DEVICE CONTROLLED BY INFORMATION EMBEDDED IN VIDEO SIGNAL	495	.Of sync signal
461	NONPICTORIAL DATA PACKET IN TELEVISION FORMAT	496	..Color
462	.Audio	497	FLUTTER OR JITTER CORRECTION (E.G., DYNAMIC REPRODUCTION)
463	.Full field	498	.Specified color
464	.Sync	499	..Using frequency shifting (e.g., heterodyne)
465	.Data separation or detection	500	SYNCHRONIZATION
466	.Error correction or prevention	501	.Reprocessing
467	.Data format	502	..Specified color
468	.Including teletext decoder or display	503	.For sequential color components
469	FORMAT	504	..With line rate switch (e.g., SECAM)
470	.Adapted to reduce noise or for frequency modulation (e.g., variable gain)	505	.Phase locking regenerated subcarrier to color burst
471	.Including pulse modulation of video signal (e.g., pulse width, PAM)	506	..Burst gate
472	..Pulse code modulation	507	..Including demodulator
473	.Including additional information	508	...Digital
474	..For controlling video processing (e.g., digitally assisted video)	509	...With line rate switch (e.g., PAL)
475	..Additional modulation of picture carrier (e.g., quadrature)	510	.Locking of computer to video timebase
476	..During sync, blanking, or overscan	511	.Control of picture position
477	...During both vertical and horizontal blanking	512	.Locking of video or audio to reference timebase
478	...During vertical blanking	513	..Frame or field synchronizers
479	...During horizontal blanking	514	...Color television
480	....Sound signal	515	..Audio to video
481	.....Plural (e.g., stereo or SAP)	516	..By controlling video or sync generator
482	...Sound signal	517	...Color television
483	....Plural (e.g., stereo or SAP)	518	..Including compensation for transmission delays
484	..Sound signal	519	...Color television
485	...Plural (e.g., stereo or SAP)	520	..Color
486	..Including the use of a subcarrier	521	.Sync generation
		522	..Means on video signal generator
		523	..With addressable memory
		524	..With counter or frequency divider

525	.Sync separation	563	.For display of additional information
526	..Field or frame identification	564	..Simultaneously and on same screen (e.g., multiscreen)
527	...Color	565	...Picture in picture
528	..Including automatic gain control (AGC)	566	....Color television
529	..To produce distinct vertical output	567	....Memory
530	...With distinct horizontal output	568	....Compression
531	..To produce distinct horizontal output	569	..Receiver indicator (e.g., on screen display)
532	..By amplitude	570	...Tuning indication
533	..Noise reduction	571	IMAGE SIGNAL PROCESSING CIRCUITRY SPECIFIC TO TELEVISION
534	...Amplitude limiting	572	.A/D converters
535	...Noise inversion	573	..Analog to binary
536	.Automatic phase or frequency control	574	..Including dither
537	..Of sampling or clock	575	.Video reprocessing
538	...With data interpolation	576	.Selective image modification (e.g., touch up)
539	...Color	577	..Color change type
540	..Horizontal sync component	578	.Special effects
541	...Cascaded phase or frequency adjusting	579	..Strobe (e.g., ball tracker)
542	...Plural distinct operating modes	580	..Geometric transformation
543	....Line rates	581	...Size change
544	....Locking rates	582	....Color signal
545	.....Different mode during vertical blanking	583	...Rotation
546	...Countdown	584	..Combining plural sources
547	..Vertical sync component	585	...Including priority key
548	...Countdown	586	...Foreground/background insertion
549	..Using color subcarrier	587	....Including hue detection (e.g., chroma key)
550	.To achieve interlaced scanning	588	...Multiple distinct images (e.g., splitscreen)
551	.Of mechanical scan	589	...Including insertion of characters or graphics (e.g., titles)
552	COMBINED WITH DIVERSE ART DEVICE (E.G., COMPUTER, TELEPHONE)	590	...Specified details of key signal generation or processing
553	BASIC RECEIVER WITH ADDITIONAL FUNCTION	591	....Self keyers (e.g., key generated from video being mixed)
554	.Multimode (e.g., composite, Y, C; baseband RF)	592	.....Chroma key (e.g., hue detector)
555	..For receiving more than one format at will (e.g., NTSC/PAL)	593	....Artificial key generation
556	...For format with different aspect ratio	594	.....Wipes signal generator
557	...Color processing	595	.....Fades signal generator
558	..Format detection	596	.....Window signal generator (e.g., rectangle)
559	.Instant replay or freeze frame	597	....For generation of soft edge (e.g., blending)
560	..Color television processing	598	...Specified details of signal combining
561	.For magnification of part of image	599	....Color signal
562	..Color television		

600	....Graphic or character insertion type	629	...Including horizontal transition
601	...Marker or pointer generator	630	..Color television processing
602	.Display controlled by ambient light	631	...Luminance transition controls chrominance transition
603	..Specified color (e.g., saturation and contrast control)	632	.Sound muting
604	..Including nonstandard signal detection controlling processing	633	..Including picture blanking
605	..Including vertical interval reference (e.g., VIR)	634	.Picture blanking
606	.Combined noise reduction and transition sharpening	635	..For color television
607	.Noise or undesired signal reduction	636	..At transmitter
608	..Processing at encoder or transmitter (e.g., pre-correction)	637	..Retrace type
609	...Reduction of chrominance luminance cross-talk (e.g., precomb)	638	.Chrominance signal demodulator
610	....Adaptive	639	..Digital
611	...To suppress echo	640	..PAL signal
612	...Color signals	641	..For quadrature signal (e.g., NTSC)
613	...Complementary system (e.g., preemphasis - deemphasis)	642	.Color encoder or chrominance signal modulator
614	..Ghost elimination (e.g., multipath)	643	.Color killer
615	..Blackspot or shading correction (e.g., corrects for fixed pattern defects)	644	..Including chrominance signal amplitude control
616	..Dropout compensator (e.g., replacement type)	645	.Chrominance signal amplitude control (e.g., saturation)
617	...For color television	646	..Digital
618	..For removal of low amplitude random noise (e.g., variable bandwidth)	647	..Automatic
619	...Averaging type	648	...Picture responsive (e.g., overload)
620	....Using frame or field delays (e.g., motion adaptive)	649	.Hue control
621	....For color television	650	..Scene by scene color correction
622	...Noise component generator, limiter, subtractor type	651	..Digital
623	...Coring type	652	..Fleshtone corrector (e.g., fixed)
624	..For color television	653	...By phase change of chrominance signal or subcarrier
625	.Transition or edge sharpeners	654	..By phase change of chrominance signal or subcarrier
626	..Scanning velocity modulation	655	.Color balance or temperature (e.g., white balance)
627	..Including processing to prevent the addition of noise (e.g., coring enhancement signal, noise responsive peaking control)	656	..Receiver type
628	..Vertical transition	657	...Including feedback control
		658	....Including optical sensor to observe display (e.g., CRT)
		659	.Matrixing or mixing
		660	..Digital
		661	..Masking (e.g., R, G, B to R`, G`, B`)
		662	.Chrominance phase adjuster (e.g., inverter)
		663	.Chrominance-luminance signal separation
		664	..Logic circuit type
		665	..Including comb filter (e.g., using line, field, frame delays)

666	...Including adaptive artifacts removal (e.g., switchable trap or LPF in luma channel)	700	.Motion dependent key signal generation or scene change detection
667	...Adaptive comb filter	701	..Specified processing of frame or field difference signal (e.g., noise reduction, key signal spreading)
668	....Selects or blends two or more separated signals to derive output	702	..Composite color signal
669	.....Including frame or field delays (e.g., motion adaptive)	703	..Hue or saturation detector
670	...Including frame or field delays	704	..Sweep expansion or reduction
671	.Gray scale transformation	705	..Switching
672	..Using histogram	706	..receiver type
673	..Combined contrast control and brightness or DC level control	707	..Amplifiers
674	..Nonlinear amplitude modification (e.g., gamma)	708	..Color television signal processing
675	...Color television	709	..Signal modification for one gun color tube (e.g., dot sequential)
676	...By adding outputs from parallel channels	710	..Differential phase or amplitude responsive
677	...With specified DC level control	711	..Frequency response modification
678	..Automatic range control (e.g., AGC, automatic contrast control)	712	..Luminance channel circuitry
679	...Color television	713	..Chrominance channel circuitry
680	...At transmitter	714	..With details of static storage device
681	...Carrier envelope	715	..For storing a sequence of frames or fields
682	...Sync or blanking	716	..Specified data formatting (e.g., memory mapping)
683	....Noise reduction or elimination	717	...Of color signal
684	....Keyed	718	..Accessing circuitry
685	...Delayed AGC	719	...Including processor interface (e.g., CPU)
686	..Manual contrast control (e.g., linear)	720	..Digital
687	..Brightness control	721	..Plural processing units
688	..By subtracting averaged active video portion (e.g., flare)	722	STUDIO EQUIPMENT
689	..With DC clamping	723	TELEVISION TRANSMITTER CIRCUITRY
690	..White limiter	724	..Modulator
691	..DC insertion	725	RECEIVER CIRCUITRY
692	..Color television	726	..Demodulator
693	..At transmitter	727	..Color television
694	..For plural signals or signal components	728	..Color television
695	..Level inserted during keying signals (e.g., keyed clamp)	729	..Television receiver adapted to receive radio broadcast or in combination with radio receiver
696	..Insertion level derived by key signals	730	..Power supply
697	...Level derived within feedback path	731	..Tuning
698	..Diode	732	..Search tuning
699	..Motion vector generation	733	..Tuning voltage
		734	..Remote control
		735	..Automatic frequency control
		736	..Sound traps
		737	..Intercarrier circuits
		738	..Sound circuit

739	VIDEO DISPLAY	777	...With intensifier
740	.Array of shutters	778	...Plural CRTs
741	.Red-white phenomena	779	....With optical element
742	.Color sequential	780	.....Beam combining
743	..With moving color filters	781	...With optical element
744	.Projection device	782	....Mirror arrangement
745	..With alignment, registration or focus	783	.....Concave mirror
746	...Raster shape distortion	784	.....With correcting plate
747	...Raster size or position compensation	785	....Adjustable
748	..With cooling device	786	....With screen or absorption filter
749	...Liquid	787	...Cabinet or chassis
750	..Plural parallel light modulators	788	....Folding
751	...Liquid crystal	789	..Cabinet or chassis
752	...Using birefringent or polarizing medium (e.g., Kerr cell, Pockel's cell, etc.)	790	.Liquid crystal
753	....Electron beam addressed	791	..Color TV
754	...Acousto-optic (e.g., Bragg cell, etc.)	792	..Scanning circuit
755	...Deformable medium	793	...Interlacing
756	...With optical element	794	..With cabinet or housing structure
757	....Beam combining	795	.Direct viewed light valve
758	..Plural serial light modulators	796	.Vacuum panel
759	..Single light modulator	797	.Gas discharge
760	...Color TV	798	.Array of lamps
761	....Liquid crystal	799	..Color TV
762	....Using birefringent or polarizing medium (e.g., Kerr cell, Pockel's cell, etc.)	800	.Electroluminescent (e.g., scanned matrix, etc.)
763	.....Electron beam addressed	801	..Light emitting diode
764	....Deformable medium	802	...Color TV
765	.....Fluid	803	..Color TV
766	...Liquid crystal	804	.With optical fiber device
767	...Using birefringent or polarizing medium (e.g., Kerr cell, Pockel's cell, etc.)	805	.Cathode-ray tube
768	....Electron beam addressed	806	..With distortion, alignment or focus
769	...Acousto-optic	807	...Color convergence correction
770	...Deformable medium	808	..Color TV
771	....Including solid-state deflection elements (e.g., deformable mirror device (DMD))	809	...Separate electron beams in single tube
772	....Medium in tape, ribbon, or membrane form	810	...One electron beam supplying more than one color
773	....Fluid medium	811	....Beam position indicating
774	.....Deformed into diffraction grating (e.g., using electron beam)	812	.....Horizontal stripes
775	....Having significant chemical composition	813	.....Photoelectric sensor
776	..Cathode-ray tube image source	814	.....Secondary emission sensor
		815	....With electron-optical color selection
		816	...With color specific optical device
		817	....Electrochromic device
		818	..Protective device
		819	...Radiation protection for user
		820	...External electric or magnetic effect
		821	...Implosion protection

822Tensioned band
 823Protective glass or panel
 824Bonded to CRT faceplate
 825 ..Support
 826 ...CRT having only support at
 front portion
 827 ...CRT position adjustable by
 user
 828 ...Deflection element support
 829Yoke
 830Supported by CRT neck
 831Adjustable
 832 ..With optical element
 833 ...For line elimination
 834 ...Glare reduction
 835 ...Filters
 836 ..Cabinet or chassis
 837 ..With vehicle
 838 ..Portable
 839 ..Modular
 840 ..Multiple screens
 841 ..Masking
 842 ..Light shielding
 843 ..Cabinet back
 844 **MISCELLANEOUS**

CROSS-REFERENCE ART COLLECTIONS

901 **HIGH SPEED TELEVISION SYSTEM**
 902 **PHOTOCHROMIC**
 903 **INCLUDING SIDE PANEL INFORMATION**
 IN SINGLE CHANNEL
 904 **SEPARATION OR JOINING OF SIDE AND**
 CENTER PANELS
 905 **REPRODUCTION OF A COLOR FIELD OR**
 FRAME
 908 **CONVERTIBLE CIRCUITS (E.G., Y/C**
 SEPARATION OR NOISE REDUCTION)
 909 **NOISE RESPONSIVE SIGNAL**
 PROCESSING
 910 **FLICKER REDUCTION**
 911 **LINE DOUBLER ADAPTED FOR**
 REPRODUCING PROGRAM ORIGINALLY
 FROM FILM (E.G., 24 FRAME PER
 SECOND)
 912 **DIFFERENTIAL AMPLITUDE**
 CONSIDERATION (E.G., AMPLITUDE
 VS. FREQUENCY)
 913 **LETTERBOX (E.G., DISPLAY 16:9**
 ASPECT RATIO IMAGE ON 4:3
 SCREEN)
 914 **DELAY FOR EQUALIZATION**

FOREIGN ART COLLECTIONS

FOR 000 CLASS-RELATED FOREIGN DOCUMENTS

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

FOR 100 BANDWIDTH REDUCTION SYSTEM (348/384)

FOR 101 .Plural video programs in single channel (348/385)

FOR 102 ..Color television (348/386)

FOR 103 ..Bit-rate reduction (348/387)

FOR 104 .Multiple channel (e.g., plural carrier) (348/388)

FOR 105 ..Including one conventional or compatible channel (e.g., two channel NTSC systems) (348/389)

FOR 106 .Bit-rate reduction (348/390)

FOR 107 ..Specified color signal (348/391)

FOR 108 ...Sub-Nyquist sampling (348/392)

FOR 109 ...Direct coding of color composite signal (348/393)

FOR 110Predictive coding (348/394)

FOR 111Transform coding (348/395)

FOR 112 ...Including luminance signal (348/396)

FOR 113 ..Using separate coders for different picture features (e.g., highs, lows) (348/397)

FOR 114 ...Sub-band encoding (e.g., low horizontal/low vertical frequency, low horizontal/high vertical frequency) (348/398)

FOR 115 ..Picture feature dependent sampling rate or sample selection (348/399)

FOR 116 ..Involving hybrid transform and difference coding (348/400)

FOR 117 ...With prior difference coding (348/401)

- FOR 118Including motion vector (348/402)
- FOR 119 ..Involving transform coding (348/403)
- FOR 120 ...Adaptive (348/404)
- FOR 121Quantizer (348/405)
- FOR 122Normalizer (348/406)
- FOR 123Motion (348/407)
- FOR 124 ...Transformed sample selection (e.g., hierarchical sample selection) (348/408)
- FOR 125 ..Involving difference transmission (348/409)
- FOR 126 ...Involving both PCM and DPCM encoding (348/410)
- FOR 127 ...Plural predictors (348/411)
- FOR 128Including temporal predictor (e.g., frame difference) (348/412)
- FOR 129Including motion vector (348/413)
- FOR 130Involving vector quantization (348/414)
- FOR 131 ...Including temporal prediction (e.g., frame difference) (348/415)
- FOR 132Including motion vector (348/416)
- FOR 133Involving vector quantization (348/417)
- FOR 134 ...Involving vector quantization (348/418)
- FOR 135 ...Coding element controlled by buffer fullness (e.g., adaptive quantizer) (348/419)
- FOR 136 ..Involving block coding (348/420)
- FOR 137 ...PCM represents minimum, maximum, or average of block (348/421)
- FOR 138 ..Involving vector quantization (348/422)
- FOR 139 ..Arrangements for multiplexing one video signal, one or more audio signals, and a synchronizing signal (348/423)
- FOR 140 ..Sub-Nyquist sampling (348/424)
- FOR 141 ...Adaptive (348/425)
- FOR 142 ..Associated signal processing (348/845)
- FOR 143 ...Involving error detection or correction (348/845.1)
- FOR 144 ...Involving signal formatting (348/845.2)
- FOR 145 ...Involving synchronization (348/845.3)
- FOR 146 .Format type (e.g., HDTV or EDTV) (348/426)
- FOR 147 ..Including frequency folding (e.g., subsampling) (348/427)
- FOR 148 ...Spotwobble (e.g., pixels from plural lines form single transmitted line) (348/428)
- FOR 149 ...Including video related information (e.g., digitally assisted television) (348/429)
- FOR 150 ...Using two or more frames (348/430)
- FOR 151Motion adaptive (348/431)
- FOR 152 ..Added video information in standard channel format (e.g., compatible EDTV) (348/432)
- FOR 153 ...Including additional modulation of picture carrier (e.g., quadrature) (348/433)
- FOR 154 ...Including information in sync, blanking, or overscan (348/434)
- FOR 155During vertical blanking interval (348/435)
- FOR 156 ...Including the use of a subcarrier (348/436)
- FOR 157 ..Individual processing of different parts of image frequency band (e.g., sum and difference, high band/low band) (348/437)
- FOR 158 .Individual processing of different parts of image frequency band (e.g., sum and difference, high band/low band) (438/438)
- FOR 159 .Frame field or line dropping followed by time expansion and time compression (348/439)
- FOR 160 .Scan rate variation (348/440)
- CAMERA, SYSTEM AND DETAIL (348/207)**
- FOR 161 .With electronic viewfinder or display monitor (348/333)
- FOR 162 ..With indicium (348/334)
- FOR 163 **USE SURVEY AND ACCOUNTING (348/1)**
- FOR 164 .Monitoring of physical reaction of viewer (348/2)
- FOR 165 .With billing (348/3)
- FOR 166 .Monitoring of synchronization or blanking pulse (e.g., horizontal or vertical pulse signal) (348/4)

- FOR 167 .With video cassette recorder (VCR) (348/5)
- FOR 168 **USE OR ACCESS BLOCKING (E.G., LOCKING SWITCH) (348/5.5)**
- FOR 169 **WIRED BROADCAST (E.G., CABLE) (348/6)**
- FOR 170 .Broadcast on demand (348/7)
- FOR 171 .Local distribution (e.g., hotel, hospital, vehicle, etc.) (348/8)
- FOR 172 .Controlled signal substitution (e.g., emergency warning, local preemption, etc.) (348/9)
- FOR 173 .With subscriber terminal details (348/10)
- FOR 174 ..For frequency conversion (348/11)
- FOR 175 .Two-way (348/12)
- FOR 176 **TWO-WAY (E.G., INTERACTIVE) (348/13)**
- FOR 177 .With voice capability (e.g., videophone) (348/14)
- FOR 178 ..Conferencing (348/15)
- FOR 179 ..Switching (348/16)
- FOR 180 ..Transmission scheme (348/17)
- FOR 181 ...Still frame (i.e., freeze frame) (348/18)
- FOR 182 ...Field or frame difference (e.g., moving frame) (348/19)
- FOR 183 ..User positioning (e.g., parallax) (348/20)
- FOR 184 **CAMERA, SYSTEM AND DETAIL (348/207)**
- FOR 185 .Camera image stabilization (348/208)
- FOR 186 .With flying spot scanner (348/209)
- FOR 187 ..For color scanning (348/210)
- FOR 188 .Remote control (348/211)
- FOR 189 ..By multiplexed control signals (e.g., duplexing, etc.) (348/212)
- FOR 190 ..Preprogrammed or stored control instructions (348/213)
- FOR 191 ..Body movement actuation (348/214)
- FOR 192 .With streak device (348/215)
- FOR 193 .Low light level (348/216)
- FOR 194 ..With image intensifier (348/217)
- FOR 195 .Unitary image formed by compiling sub-areas of same scene (e.g., array of cameras) (348/218)
- FOR 196 .Swing driven
- FOR 197 .Still and motion modes of operation (348/220)
- FOR 198 ..Exposure control (348/221)
- FOR 199 .Combined image signal generator and general image signal processing (348/222)
- FOR 200 ..Color balance (e.g., white balance) (348/223)
- FOR 201 ...Dependent upon operation or characteristic of iris, flash, lens, or filter (348/224)
- FOR 202 ...With means for preventing colored object from effecting color balance (348/225)
- FOR 203 ...Including flicker detection (e.g., fluorescent (348/226)
- FOR 204 ...With ambient light sensor (348/227)
- FOR 205 ...Responsive to output signal (348/228)
- FOR 206 ..Combined automatic gain control and exposure control (i.e., sensitivity control (348/229)
- FOR 207 ...Readout of solid-state image sensor considered or altered (348/230)
- FOR 208 ..With details of static memory for output image (e.g., for a still camera) (348/231)
- FOR 209 ...With storage of additional, non-image information (e.g., audio, time, date) (348/232)
- FOR 210 ...Detachable (348/233)
- FOR 211 ...Electronic zoom (348/240)
- FOR 212 ..Variable magnification (i.e., zoom) (348/358)

